

In the Claims:

1     1.     (original) Flow-mechanically effective surface of a device  
2         moving in a fluid, especially a flying machine, especially  
3         a lifting surface of a flying machine, whereby the surface  
4         (1) comprises an elastic axis (EA) extending in the span  
5         direction (6) of the surface (1) and an adjustable control  
6         surface (3), characterized in that the surface (1) is  
7         elastically deformable in a bending direction and/or in a  
8         direction about the elastic axis (EA) dependent on the  
9         adjustment of the control surface (3) while changing the  
10        induced flow-mechanical resistance, and that a control  
11        and/or regulating arrangement (10, 11, 12; 13, 14, 15) for  
12        the adjustment of the control surface (3) in the sense of  
13        a minimization of the induced flow-mechanical resistance of  
14        the surface (1) is provided.

1     2.     (original) Flow-mechanically effective surface according to  
2         claim 1, characterized in that the control surface (3a; 3b;  
3         3c; 3d; 3e; 3f) is arranged offset by a prescribed spacing  
4         distance relative to the elastic axis (EA).

Claims 3 to 18 (canceled).

- 1     **19.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3a; 3b;  
3           3c; 3d; 3e; 3f) is arranged rotatably supported about a  
4           rotation axis (4), and that the rotation axis (4) or at  
5           least a component thereof extends in the direction of the  
6           elastic axis (EA).
- 1     **20.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3) is  
3           arranged by a prescribed spacing distance behind the  
4           elastic axis (EA).
- 1     **21.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3a; 3b;  
3           3c; 3d; 3e) is arranged by a prescribed spacing distance in  
4           front of the elastic axis (EA).
- 1     **22.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3b; 3d)  
3           is arranged within the wing span.
- 1     **23.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3a; 3c;  
3           3e; 3f) is arranged outside of the wing span.
- 1     **24.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3a; 3b)  
3           is arranged behind the leading edge of the surface (1).

1     **25.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3c; 3d)  
3           is arranged in front of the leading edge of the surface  
4           (1).

1     **26.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3c; 3e)  
3           is provided in addition to a wing tip surface (winglet) (2)  
4           at the surface tip.

1     **27.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the control surface (3f)  
3           itself is embodied as a wing tip surface.

1     **28.**   (new) Flow-mechanically effective surface according to  
2           claim 27, characterized in that the rotation axis (4) of  
3           the control surface (3f) forming the wing tip surface (2)  
4           extends obliquely relative to the direction of the elastic  
5           axis (EA).

1     **29.**   (new) Flow-mechanically effective surface according to  
2           claim 27, characterized that the surface (1) is a lifting  
3           wing of a flying machine, whereby the wing tip surface (2)  
4           continues the lifting wing at its tip obliquely or  
5           vertically upwardly.

1     **30.**   (new) Flow-mechanically effective surface according to  
2           claim 26, characterized that the surface (1) is a lifting  
3           wing of a flying machine, whereby the wing tip surface (2)  
4           continues the lifting wing at its tip obliquely or  
5           vertically upwardly.

1     **31.**   (new) Flow-mechanically effective surface according to  
2           claim 26, characterized in that the surface (1) is a  
3           lifting wing of a flying machine, whereby the wing tip  
4           surface (2) continues the lifting wing obliquely or  
5           vertically upwardly and the control surface (3a; 3b; 3c;  
6           3e) continues the lifting wing in its direction or  
7           obliquely downwardly.

1     **32.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the surface (1) is the  
3           lifting surface of an aircraft.

1     **33.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that the surface (1) is the  
3           lifting surface of a rotary wing aircraft.

1     **34.**   (new) Flow-mechanically effective surface according to  
2           claim 1, characterized in that there is provided a control  
3           arrangement (10, 11, 12) for the generation of an actuating  
4           signal for the control surface (3) from data relating to  
5           the aircraft loading and the flight condition, with  
6           utilization of stored nominal value data.

1   **35.**   (new) Flow-mechanically effective surface according to  
2       claim 1, characterized in that there is provided a  
3       regulating arrangement (13, 14, 15) for the generation of  
4       an actuating signal for the control surface (3) from  
5       comparison of measured data representing the actual elastic  
6       deformation of the flow-mechanically effective surface (1)  
7       with nominal data representing a nominal deformation of the  
8       flow-mechanically effective surface (1) prescribed for the  
9       aircraft loading and the flight condition.

**[REMARKS FOLLOW ON NEXT PAGE]**